

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Patel et al.

Application No.:

10/743,366

Filing Date:

December 22, 2003

Confirmation No.:

7968

Title:

MODAFINIL COMPOSITIONS

Examiner:

Oh, Simon J.

Group Art Unit:

1615

### **APPEAL BRIEF**

Mail Stop Appeal Brief-Patents Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. § 41.31 and § 41.37, Appellants hereby submit this their Brief on Appeal from the Examiner's Final Rejection of March 21, 2005, of all pending claims in the application (Claims 1 - 5, 7, 9, and 11 - 23). This Brief is submitted in the arrangement specified by 37 C.F.R. § 41.37, and the requisite fee of \$500.00 is attached. Any additional fees which may be required in connection with this filing should be taken from, or any overage credited to, Deposit Account No. 12-2355.

### I. Real Party in Interest

The real party in interest to the outcome of the subject application is Sandoz, Inc. of Princeton, New Jersey, a Colorado corporation, which is the assignee of all the interest of the named inventors, Ashish Anilbhai Patel and Gary Barbera.<sup>1</sup>

01/24/2006 BABRAHA1 00000071 10743366

01 FC:1402

500.00 OP

### II. Related Appeals and Interferences

No other appeals or interferences are known to Appellants, Appellants' legal

<sup>&</sup>lt;sup>1</sup> The assignment is currently unrecorded in the Patent Office.

representatives, or Appellants' Assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

### III. Status of Claims

On September 16, 2005, Appellants took this appeal from the final rejection of Claims 1 - 5, 7, 9, and 11 - 23 (all of the pending claims) of the above-identified patent application. In accordance with 37 C.F.R. § 41.37, the claims involved in this appeal are set forth in the attached appendix.

### IV. Status of Amendments

This case was originally filed with 23 claims. On January 5, 2005, Appellants submitted their response to the first Office Action wherein Claims 1, 4, 7, 11, and 14 were amended, and Claims 6 and 10 were cancelled. The claims were finally rejected on March 21, 2005. On August 5, 2005, Appellants submitted their second amendment in which Claims 9 and 20 were amended, Claims 1, 4, and 7 were amended a second time, and Claims 8 and 10 were cancelled. Although the August 5 amendment was submitted after final rejection, the Examiner stated that the amendments would be entered for purposes of appeal in his August 30, 2005 Advisory Action. Thus the claims currently read as amended by Appellants' amendment of August 5, 2005.

### V. Summary of the Claimed Subject Matter

The present invention relates to a pharmaceutical composition, to a method of preparing a pharmaceutical composition, and to method of treating a disease or disorder using a pharmaceutical composition.

The invention provides novel compositions of the pharmaceutical compound modafinil, which has been shown to exhibit wake-promoting activity. Modafinil has been approved by the FDA for use in the treatment of disorders such as narcolepsy, which can cause excessive daytime sleepiness and other problems. Modafinil is currently commercially available under the trademark PROVIGIL from Cephalon, Inc.

Although formulated and prepared differently from PROVIGIL, it has unexpectedly

been determined that the pharmaceutical compositions of the invention exhibit comparable stability, dissolution and bioavailability as compared to PROVIGIL. This is particularly important in view of the fact that prior art teaches the necessity of using modafinil in a form in which the particle size is well below 200 microns, whereas the inventors have determined that compositions of modafinil in a particle size well above 200 microns are comparably effective.

Accordingly, the pharmaceutical compositions of the invention are useful in the treatment of sleepiness, promotion of wakefulness, treatment of Parkinson's disease, cerebral ischemia, stroke, sleep apneas, eating disorders, stimulation of appetite and weight gain, treatment of attention deficit hyperactivity disorder and fatigue and improvement of cognitive dysfunction.

Claim 1 is directed to the pharmaceutical composition itself. Claim 1 calls for a composition comprising modafinil together with calcium silicate in the form of particles. The composition is described throughout Appellants' application, and, in particular, at page 3, lines 19 - 22. Claim 1 specifies that greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75 (Page 2, lines 27 - 29).

Claims 2, 3, 5, 7, 9, 11 - 19, and 23 all directly or indirectly depend from Claim 1.

Claims 2 - 5 further define the particle size of the modafinil in the composition. Claim 2 calls for from about 8% to about 30% of the cumulative total of the modafinil particles in the composition to have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75 (Page 2, line 29 - page 3, line 3). Claim 3 calls for from about 8% to about 10% of the cumulative total of the modafinil particles in the composition to have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75 (Page 2, line 29 - page 3, line 3). Claim 5 calls for less than about 55% of the cumulative total of the modafinil particles in the composition to have a particle size greater than about 90 microns as determined by a U.S. Sieve No. 170 (Page 3, lines 7 - 9).

Claims 12 and 13 further define the weight percent of modafinil present in the composition, based on the total weight of the composition. Claim 12 calls for modafinil in an amount of from about 1 weight percent to about 99 weight percent (Page 3, lines 15 - 17).

Claim 13 calls for modafinil in an amount of from about 30 weight percent to about 50 weight percent(Page 3, lines 17 - 18).

Claims 7, 9, and 11 further define which additional silicates may be present in the composition in addition to calcium silicate. Claim 7 calls for an additional silicate selected from the group consisting of sodium silicate, magnesium silicate, magnesium trisilicate, and combinations thereof (Page 3, lines 19 - 22). Claim 9 specifically calls for magnesium trisilicate in the composition (Page 3, lines 22 - 23). On the other hand, Claim 11 specifies that the composition be essentially free of magnesium silicate (Page 4, lines 1 - 2).

Claims 14 - 16 further define the weight percent of silicate present in the composition, based on the total weight of the composition. Claim 14 calls for silicate in an amount from about 0.1 weight percent to about 50 weight percent (Page 3, lines 24 - 26). Claim 15 calls for silicate in an amount from about 1 weight percent to about 10 weight percent (Page 3, lines 26 - 27). Claim 16 calls for silicate in an amount from about 5 weight percent to about 6 weight percent (Page 4, lines 26 - 27).

Claims 17 - 19 further define the excipients which may be present in the composition. Claim 17 specifies that the composition additionally comprises one or more excipients (Page 4, line 6). Claim 18 calls for an excipient selected from the group consisting of diluents, disintegrants, lubricants, glidants, binders, fillers, emulsifiers, electrolytes, wetting agents, solubilizers, surfactants, colors, pigments, anti-caking agents and combinations thereof (Page 4, lines 6 - 9). Claim 19 calls for a diluent selected from the group consisting of a starch, lactose and microcrystalline cellulose (Page 4, lines 15 - 19); a disintegrant selected from the group consisting of pre-gelatinized starch, a cross-linked sodium carboxymethyl cellulose, and combinations thereof (Page 4, lines 20 - 25); and a lubricant which is magnesium stearate (Page 5, lines 8 - 13).

Claim 4 is the second independent claim. Like Claim 1, Claim 4 is directed to a pharmaceutical composition and calls for a composition comprising modafinil and calcium silicate in the form of particles (Page 3, lines 19 - 22). Like Claim 1, Claim 4 also specifies that greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75 (Page 2, lines 27 - 29). In addition, Claim 4 specifies that less than about 8% of

the cumulative total of the modafinil particles in the composition have a particle size greater than about 250 microns as determined by a U.S. Sieve No. 60 (Page 3, lines 3 - 6).

The third independent claim is Claim 20, which is a method claim directed to a process for preparing a pharmaceutical composition. The claimed process comprises: (i) mixing modafinil and calcium silicate to form a mixture; and (ii) optionally mixing other excipients with the mixture formed in Step (i) to form a composition (Page 5, lines 19 - 22). Claims 21 and 22 depend from Claim 20. Claim 21 calls the composition to be in the form of a tablet (Page 6, lines 1 - 7). Claim 22 calls for the composition to be in the form of a capsule (Page 6, lines 8 - 11).

Claim 23 is the final claim. While Claim 23 depends from Claim 1, it is in fact a method claim directed to a method of treating a disease or disorder in a subject in need thereof comprising administering to the subject a therapeutically effective amount of the pharmaceutical composition of Claim 1 containing modafinil in which a substantial portion of the modafinil parties are larger than 250 microns. (Page 3, lines 19 - 22; page 2, lines 27 - 29).

In view of the aforementioned differences in the scope of the pending claims, it is submitted that each pending claim is separately and independently patentable over the cited prior art, and that the claims do not stand or fall together as a group.

### VI. Grounds of Rejction to be Reviewed on Appeal

The issues presented herein for review are as follows:

- 1. To the extent the Examiner continues to rely upon U.S. Patent Application Publication No. 2004/0105891 to Bentolila et al. ("Bentolila") as a prior art reference, whether Bentolila may be relied upon by the Examiner as a prior art reference in view of Appellants' Rule 131 declaration?
- 2. Whether the Examiner has demonstrated that the subject matter of Claims 1 5, 7 9, and 11 23 would have been considered obvious to a person of ordinary skill in the art over U.S. Patent Application Publication No. 2003/0220403 to Corvari et al. ("Corvari")?
- 3. To the extent Bentolila, et al. may be relied upon as a prior art reference, whether the Examiner has demonstrated that the subject matter of Claims 1 5, 7 9, and 11 23

would have been considered obvious to a person of ordinary skill in the art over Corvari et al. in view of Bentolila et al.<sup>2</sup>?

### VII. Argument

### A. Summary

The Examiner's obviousness rejections of all of the pending claims in the present application are erroneous and contrary to law and should be reversed.

The Bentolila reference cannot properly or lawfully be relied upon by the Examiner in his obviousness rejection. Appellants have submitted a declaration under Rule 131 which clearly demonstrates conception and reduction to practice of their invention prior to the Section 102 (e) date of the Bentolila application. Accordingly, Bentolila does not qualify as prior art and may not lawfully be relied upon in the Examiner's rejections. Any rejection based upon Bentolila is improper and should be overturned by the Board.

The sole remaining prior art reference, Corvari, does not disclose or suggest the claimed invention, which specifically calls for a pharmaceutical composition comprising modafinil and calcium silicate in the form of particles, wherein greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns. Corvari itself is silent as to the particle size of the modafinil used it its composition. Consequently, it is impossible for the Corvari reference, taken alone, to lead one of ordinary skill to the claimed invention wherein at least 5% and up to about 50% of the modafinil particles have a particle size greater than about 200 microns.

However, Corvari refers those of skill in the art to an even earlier reference, the '845 patent. The '845 patent, in turn, teaches the use of modafinil having a particle size of <u>less</u> than 200 microns. By referring back to the '845 patent then, Corvari, in effect, teaches directly away from the claimed invention. Rather than leading one of skill to the claimed invention, Corvari would lead him or her further away. Accordingly, the obviousness

<sup>&</sup>lt;sup>2</sup> For convenience and for sake of clarity and simplicity, Appellants will, for the most part, omit references to the "et al." convention when referring to the references relied upon by the Examiner. The Board will no doubt take notice of the fact that the references name multiple inventors.

rejection based upon Corvari is improper, unsustainable, and must be overturned.

Finally, even if the Bentolila reference could be relied upon, and even if Corvari and Bentolila could be combined (the Examiner points to no motivation to do so), the claimed invention would still not be obvious from the combination. Corvari and Bentolila point in opposite directions with regard to particle size so that the most one might conclude from the combination of the two would be to "try" the Bentolila particle size distribution with Corvari. The law, however, does not equate obvious to try with obviousness. Thus, this combination would still not render the claimed invention obvious.

Accordingly, the Examiner's rejections in this case are not well-founded. It is respectfully requested that they be reversed, and that Appellants be granted their patent at the earliest possible convenience.

### B. Prior art rejections

### 1. The References

U.S. Patent Application Publication No. 2003 / 0220403 to Corvari et al. is the Examiner's primary reference. Corvari describes pharmaceutical modafinil compositions. Corvari describes PROVIGIL in the background as a pharmaceutical product available from Cephalon Inc. in the form of tablets containing 100 mg or 200 mg modafinil, with several excipients, including magnesium silicate and talc (Page 1, ¶ 0005).

Corvari focuses on modafinil compositions said to exhibit properties similar to Cephalon's PROVIGIL product, including comparable stability, dissolution rate, hardness, friability, thickness, disintegration, size and shape, and weight variation characteristics (Page 1,¶ 0006). According to Corvari, this may be achieved with a modafinil composition which excludes magnesium silicate and talc (Page 1,¶ 0006).

Corvari teaches that their magnesium silicate/talc-free compositions of modafinil may include one or more diluents, disintegrants, binders and lubricants (Page 2, ¶ 0018). In particular, Corvari disclose that the compositions may include a glidant "such as microcrystalline cellulose (such as Avicel® PH, and Ceolus<sup>TM</sup>), alkali stearates (such as magnesium stearate or calcium stearate), silicate salts (such as magnesium silicate [sic],

magnesium trisilicate, magnesium silicate anhydrous, calcium silicate), starches, mineral salts (such as talc [sic]), and colloidal silicon dioxide (such as Cab-O-Sil®, Syloid®, Aerosil®)"(Page 3, ¶ 0026).

Corvari is silent as to the particle size of the modafinil in the claimed composition. The only comment regarding the particle size of the modafinil is in the background, where it is said that U.S. Pat. No. 5,618,845 describes modafinil preparations with a modafinil particle size less than about 200 microns. (Page 1, ¶ 0004).

Bentolila is the Examiner's secondary reference. Bentolila was published on June 3, 2004, and to the best of Applicants' knowledge and belief, has not yet issued as a patent. Bentolila describes modafinil particles wherein at least 5% of the particles have a diameter greater than 200 microns (Page 1, ¶ 0009). According to Bentolila, modafinil tablets of this composition are bioequivalent to tablets of PROVIGIL of the same strength (Page 1, ¶ 0010). Bentolila also discloses numerous excipients which may also be included in the tablet including colloidal silicon dioxide, crospovidone, lactose, povidone, sodium stearyl fumarate and talc (Page 2, ¶ 0013). Bentolila does not disclose or suggest the use of any silicates, including calcium silicate, with modafinil.

### 2. The Rejections

In the Final Office Action of March 21, 2005, the Examiner asserted that the compositions and methods of Claims 1 - 5, 7, 9, and 11 - 23 (all pending claims) would have been obvious to the person of ordinary skill from Corvari considered in view of Bentolila. In their after-final amendment, Appellants submitted a declaration under Rule 131 to antedate the Bentolila reference.

The Examiner then submitted an Advisory Action on August 30, 2005. In this action, the Examiner took the position that the claims remain rejected "[e]ven if the applicant has sworn behind the Bentolila reference." This is somewhat confusing, in that the Examiner failed to explicitly acknowledge that the Rule 131 declaration was sufficient to remove Bentolila as a prior art reference.

It is therefore uncertain if the Examiner now intends for his obviousness rejection to be based upon Corvari alone or on the combination of Corvari and Bentolila. Accordingly, Appellants will address both possibilities herein.

### 3. Standards for Nonobviousness

Claims drafted to specifically point out and distinctly claim Appellants' invention have been rejected by the Examiner as allegedly obvious to the person of ordinary skill from either Corvari alone or Corvari combined with Bentolila. In reviewing the art rejection, this Board should first look at the references independently of what the Examiner has said and without regard to Appellants' claimed invention, and should reach its own conclusion as to whether they are obviously combinable in the first instance and, even if they are, whether they together fairly teach or suggest Appellants' claimed invention, since obviousness is a legal conclusion, the determination of which is a question of patent law. In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA, 1963); In re Carleton, 599 F.2d 1021, 202 USPQ 165 (CCPA 1979).

In this regard, its should be kept in mind the fact that the burden is on the Examiner to establish obviousness by competent evidence.

In order to establish a prima facie case of obviousness, it is necessary for the examiner to present evidence, preferably in the form of some teaching, suggestion, incentive or inference in the applied prior art, or in the form of generally available knowledge, that one having ordinary skill in the art would have been led to combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention.

Ex parte Levengood, 28 USPQ2d 1300, 1301 (Bd. Pat. App. & Int., 1985) (Citing Canella v. Starlight Archery, 804 F2d 1335, 231 USPQ 644 (Fed. Cir. 1986) and Ashland Oil Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985).

The teachings of the prior art must be considered without regard to the invention to see what they fairly suggest to the person of ordinary skill at the time the invention was made. The mere fact that a person of ordinary skill could modify the references to make them fit together to produce a later claimed invention does not make the invention obvious.

Obviousness under 35 USC 103 is not what a routineer could have done but what it

would have "been obvious" for such a person to do.

Ex Parte Marinaccio, 10 USPQ 2d 1716, 1717 (Board of Patent Appeals 1989). See also, In Re Gordon, 733 F.2d 900, 221 USPQ 1125, 1127 (CAFC 1984).

Furthermore, the art must be viewed without regard to what the Applicants teach. In other words, to imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

W. L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1550, 220 USPQ 303, 312-3 (Fed. Cir. 1983).

The courts have made it abundantly clear that considerations of patentability (from an obviousness standpoint) must be totally objective, and that the decisionmaker must avoid the use of hindsight when viewing the references for what they teach.

One cannot use hindsight to pick and choose among isolated disclosures in the prior art to depreciate the claimed invention.

<u>In re Fine</u>, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

As will be shown, the rejection in this case contravenes these principles because it is not based on what the references fairly teach or suggest, but instead is based on a hindsight reconstruction of the references which could only have been achieved with the knowledge of Appellants' teachings.

### 4. The Prior Art Rejection Should be Reversed

### a. The Claimed Invention Predates the Bentolila Reference.

Once again, it is unclear if the Examiner still intends to rely upon the Bentolila reference in his rejections. To the extent he does, his rejections are in error and should be reversed. Appellants have effectively antedated the Bentolila reference by their Rule 131 declaration. Bentolila may not be relied upon as a prior art reference against Applicants' claims.

It is Appellants' understanding that Bentolila was cited as prior art under Section 102

- (e), which qualifies certain subject matter as prior art against a claimed invention if it meets the criteria stated therein, as follows:
  - (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The Bentolila reference is a published U.S. application. The publication date is June 3, 2004. This date is after Appellants' filing date. Accordingly, Bentolila does not qualify as prior art under Section 102 (b). The filing date of the Bentolila reference is November 24, 2003. This is the date referred to in Section 102(e) which Appellants must predate in their declaration.

Appellants' declaration is clearly sufficient to predate Bentolila's filing date and remove it as a prior art reference against Appellant's claims. Again, Appellants' broadest composition claim calls for modafinil and calcium silicate wherein greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75.

Appellants' declaration describes the inventors' work in preparing a composition comprising modafinil and Micro-Cell C, a synthetic calcium silicate, prior to November 24, 2003. See Exhibit 1 to Appellants' declaration. The modafinil used in the composition is identified as being lot number 822-5-160(A). The particle size distribution of this lot of modafinil is shown in Exhibit 2 to Appellants' declaration. Exhibit 2 shows that 21.62% of the particles were between 212 and 250 microns in size, and that 17.97% of the particles were greater than 250 microns in size. This clearly satisfies Appellants' claim requirement that more than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns.

Thus, it is evident that Appellants' conceived and reduced to practice the subject matter of the claimed invention before November 24, 2003. Accordingly, Bentolila is antedated and may not lawfully be relied upon as a prior art reference against Appellant's

claims under Section 102 (e). To the extent the Examiner continues to do so, such rejections are plainly in error, and should be reversed by this Board.

### b. Corvari Does Not Describe or Suggest the Invention of Claim 1.

The Examiner takes Corvari as his primary reference in fashioning his obviousness rejections. Since Bentolila is not properly citable against Appellants' claims, Corvari is actually the only reference at issue.

Corvari does not disclose or suggest the invention as defined in Claim 1. Although Corvari may disclose prior compositions of modafinil containing calcium silicate, Corvari is silent as to the particle size of the modafinil used in the composition. Corvari has one off-hand reference in the discussion of background art to the "less than 200 microns" disclosure in the '845 patent in regard to the size of the modafinil particles, which actually leads one away from using Modafinil with particles greater than 200 microns in size.

Therefore, Corvari cannot reasonably be said to suggest a composition according to Claim 1 comprising modafinil wherein greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75. If anything, Corvari and its brief mention of the '845 patent's teaching of the necessity of using modafinil particles "less than 200 microns" in size would lead a person of ordinary skill directly away from what Appellants are claiming.

In his Advisory Action of August 30, the Examiner recognizes that Corvari "teaches particle sizes that are less than about 200 microns," but then asserts in conclusory fashion that the ranges are "at least co-termious", or that Appellant's claimed ranges would have been obvious in view of Corvari. This position is not sustainable on the record. The most Corvari discloses with respect to its composition is that the "particle size of the dried granulation mixture is reduced to achieve an appropriate particle size distribution for the subsequent processes." (Page 4, ¶ 0051). No specific ranges are disclosed or suggested and anyone reading the entire disclosure of Corvari (including its discussion of the teaching of the '845 patent) would plainly interpret Corvari's discussion of reducing the particle size of the modafinil to be a reduction to some particle size of substantially less than 200 microns

consistent with what is taught in the '845 patent.

If one having a compass wants to go north, one orients himself or herself such that the compass points north, and then moves in that direction. It would not be "obvious" in such a situation to move in a direction <u>opposite</u> to what the compass shows to be north.

In the same manner, the references applied by the Examiner would not make Appellant's claims "obvious" to the person of ordinary skill. The prior art teaches to go north. Appellants go south. Nothing could be more nonobvious than going in an opposite direction from what is taught in the prior art.

Numerous recent decisions of the Federal Circuit have made it abundantly clear that to establish a prime facie case of obviousness, the Examiner <u>must</u> be able to point to some clear suggestion in the art that would have led one of skill to combine the references so as to arrive at the claimed invention. Not only has the Examiner failed to show any motivation or suggestion in the art to produce the subject matter of Appellants' claims, he has also failed to explain from some teaching in the art why a person or ordinary sill would view a modafinil composition with a substantial amount of modafinil particles in the 200 micron + size range to be obvious when the '845 patent specifically teaches the exact opposite. The Examiner conveniently fails to account for this.

The Federal Circuit spoke at length on this point in deciding In re Lee, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002). Lee involved the appeal of an Examiner's rejection of an applicant's claim based on a combination of two references. Without pointing to any specific motivation in the art to combine the two references, the Examiner simply stated in conclusory fashion that combining the references would have been obvious because one of the disclosures was "just a programmable feature which can be used in many different device[s]" and because the result would be "user friendly" and function "as a tutorial." See Lee, 61 USPQ2d at 1432. The Board of Patent Appeals and Interferences affirmed the Examiner, stating that "the conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference." See Id.

The Federal Circuit reversed the rejections. The Court stated that the Examiner's "conclusory statements ... do not adequately address the issue of motivation to combine.

This factual question of motivation is material to patentability, and <u>could not be resolved on subjective belief and unknown authority</u>." <u>See Lee</u>, 61 USPQ2d at 1434 (emphasis added). The court also found fault with reliance on "basic knowledge" or "common sense". Neither was a suitable substitute for authority when the law requires authority. <u>See Lee</u>, 61 USPQ2d at 1435.

The rejection in the present case, based upon Corvari alone, is similar to that seen in Lee, but worse. The Examiner here has pointed to no specific teaching in the Corvari reference sufficient to provide a motivation to the person of ordinary skill modify the references so as to make modafinil compositions containing a substantial amount of modafinil particles larger than 200 microns together with at least calcium silicate, which is especially telling given the explicit teaching in the '845 patent squarely against what Appellants are claiming. In reality, the rejection amounts to nothing more than a thinly veiled attempt to reconstruct Appellants' invention in hindsight using the invention itself as a template, i.e., to use "that which the inventor taught against its teacher." See W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312 - 313 (Fed. Cir. 1983). This is clearly contrary to law, and hence the Examiner's obviousness rejection based upon Corvari considered alone or in combination with any other art is in error, and should be reversed.

## c. To the Extent Corvari Suggests any Particle Size Distribution, It Teaches Away From the Invention of Claim 1.

Again, to the extent one of ordinary skill would notice any discussion in Corvari regarding the importance of the modafinil particle size distribution, the information would have led him or her away from Appellant's claimed invention. One of ordinary skill would see that Corvari's stated purpose is to prepare modafinil compositions which exhibit properties said to be similar to Cephalon's PROVIGIL product, including comparable stability, dissolution rate, hardness, friability, thickness, disintegration, size and shape, and weight variation characteristics (Page 1, ¶ 0006). Corvari modifies the additives so as to exclude magnesium silicate and talc (Page 1, ¶ 0006).

Thus, if one of ordinary skill in the art were being guided by Corvari, he would start with Cephalon's conventional PROVIGIL composition and only modify this composition to

the extent instructed by Corvari and perhaps the '845 patent discussed in Corvari in regard to use of a smaller particle size well below 200 microns. For those features where Corvari is silent, the reference would lead one of skill to fall back upon the conventional PROVIGIL composition. A review of the '845 patent shows that it is owned by Cephalon, the manufacturer of PROVIGIL. Thus, it can be said that the '845 patent discloses the PROVIGIL "recipe." Since Corvari intends to imitate and slightly modify or improve the recipe for PROVIGIL, it is plain that Corvari's compositions would be prepared with a particle size well below 200 microns.

This, of course, is directly contrary to what is required by the claimed invention, which specifies that greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75. Accordingly, the invention of Claim 1 is in no way obvious from Corvari and, in fact, stands as the very antithesis of what someone would be led to make from Corvari in terms of the modafinil particle size and other characteristics.

# d. Even if Corvari Could be Combined with Bentolila, the Result Would Still Lead One of Skill Away from the Claimed Invention.

As discussed above, if Corvari suggests anything in relation to the particle size distribution for the modafinil particles, it is to use the same particle size distribution as in the original PROVIGIL product described in the '845 patent, i.e., to use modafinil particles in the composition which are well below 200 microns in size.

Bentolila, however, teaches the use of modafinil particles greater than 200 microns. Thus, Benolila and Corvari are completely contradictory to one another with regard to the particle size of the modafinil. One teaches to use a particle size less than 200 microns and the other teaches to use a particle size greater than 200 microns. One points north, the other points south.

The two references, then, cannot be "obviously" combined to render the invention of Claim 1 obvious. It must be remembered that when a reference is cited in an obviousness rejection, the reference must be taken as a whole for all that it teaches, including both

favorable and unfavorable teachings. See In re Wesslau, 353 F.2d 238, 241, 147 USPQ 391, 393 (C.C.P.A. 1965). Moreover, the mere fact that a person of ordinary skill "could" modify the references to make them fit together to produce the invention does not mean the invention is obvious. Obviousness is not what a routineer could have done but what would have been obvious for such a person to do based on the teachings of the art. Ex parte Marinaccio, 10 USPQ2d 1716, 1717 (Bd. Pat. App. 1989). See also, In re Gordon, 733 F.2d 900, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

A person of ordinary skill, having both Corvari and Bentolila in front of him, would in all likelihood have disregarded Bentolila and followed the suggestion of Corvari (and by extension the earlier '845 patent) and used smaller modafinil particles outside of Appellant's claimed size range. At most, a person of ordinary skill "might" have tried to utilize Bentolila's modafinil particle size distribution in Corvari's composition. Once again, however, obviousness is not what a person of skill might have done or what may be obvious to "try," but what he would have done in view of the prior art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Claim 1 is not obvious in view of Corvari and Bentolila and this Board should reverse the Examiner's rejection based upon this purported combination of references<sup>3</sup>.

### 5. Claims 2 - 5, 14 - 16, and 20 Separately Distinguish Over the Cited References

The above arguments, while generally applicable to all of the rejections of the pending claims, have principally been directed to the Examiner's rejection of Claim 1. However, Claims 2 - 5, 14 - 16, and 20 are independently and separately distinguishable over the cited references for the reasons set forth herein.

### a. Claims 2 and 3

Claim 2 further limits Claim 1 by calling for from about 8% to about 30% of the cumulative total of the modafinil particles in the composition to have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75.

<sup>&</sup>lt;sup>3</sup> It must be remembered, of course, that Bentolila is not a proper or citable reference against Appellants' claims, given Appellants' effective Rule 131 declaration.

As discussed above, it is clear that the cited prior art does not render obvious the composition of modafinil and calcium silicate of Claim 1, wherein greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75. It is even more evident that the cited prior art does not render obvious the narrower limitations of Claim 2 wherein greater than from about 8% to about 30% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns. Again, the '845 specifically directs that the particle size be less than 200 microns.

Similarly, Claim 3 further limits Claim 1 by calling for from about 8% to about 10% of the cumulative total of the modafinil particles in the composition to have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75.

Just as it is clear that the cited prior art does not render obvious the composition of modafinil and calcium silicate of Claim 1, wherein greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75, it is even more clear that the cited prior art does not render obvious the narrower limitations of Claim 3 wherein from about 8% to about 10% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns.

Accordingly, the Examiner's obviousness rejections of Claims 2 and 3 are in error and should be reversed.

### b. Claim 4

Although written in independent form, Claim 4 incorporates all of the limitations of Claim 1, including the requirement that greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75. In addition, Claim 4 also includes a further limitation that less than about 8% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 250 microns as determined by a U.S. Sieve No. 60.

In the case of Claim 4, it is once again noted that the cited art does not render obvious

a composition of modafinil and calcium silicate wherein greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75. It is equally clear (if not more so) that the cited prior art does not render obvious the further limitation that less than about 8% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 250 microns as determined by a U.S. Sieve No. 60.

Accordingly, the Examiner's obviousness rejection of Claim 4 is unsustainable, and should be reversed.

### c. Claim 5

Claim 5 includes all of the limitations of Claim 1 and, in addition, calls for less than about 55% of the cumulative total of the modafinil particles in the composition to have a particle size greater than about 90 microns as determined by a U.S. Sieve No. 170.

No art cited by the Examiner teaches that in a nonobvious composition according to Claim 1, less than about 55% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 90 microns as determined by a U.S. Sieve No. 170.

Accordingly, the Examiner's obviousness rejection of Claim 5 is not sustainable, and should be reversed.

### d. Claims 14 - 16

Claim 14 includes all of the limitations of Claim 1 and in addition, calls for the amount of silicate to be from about 0.1 weight percent to about 50 weight percent, based on the total weight of the composition. Claim 15 includes all of the limitations of Claim 1 and in addition, calls for the amount of silicate to be from about 1 weight percent to about 10 weight percent, based on the total weight of the composition. Claim 16 includes all of the limitations of Claim 1 and in addition, calls for the amount of silicate to be from about 5 weight percent to about 6 weight percent, based on the total weight of the composition.

The Corvari application makes a passing reference to calcium silicate but does not disclose or suggest any particular amount of silicate to include in a modafinil composition.

The Bentolila reference is altogether silent as to either the presence or the absence of silicates in a modafinil composition.

Thus, neither Corvari alone nor Corvari in combination with Bentolila may reasonably be said to disclose or suggest the invention as defined in Claims 14, 15, or 16.

Accordingly, the Examiner's obviousness rejections of Claims 14 - 16 are in error and should be reversed.

### e. Claim 20

Claim 20 is an independent method claim directed to a process for preparing a pharmaceutical composition. The process comprises (I) mixing modafinil and calcium silicate to form a mixture; and (ii) optionally mixing other excipients with the mixture formed in Step (I) to form a composition.

This process is neither disclosed nor suggested by the Corvari reference. Accordingly it is submitted that the Examiner's obviousness rejection is in error and should be reversed.

### C. Conclusion

Appellants have clearly demonstrated that, contrary to the Examiner's contentions, the claimed invention is neither taught nor in any way suggested by cited references. In fact, the invention requires the use of a substantial amount of modafinil particles with a size greater than 200 microns, while the only citable reference Corvari specifically teaches, via its reference to the '845 patent, the necessity of having a particle size well below 200 microns. Appellants' claimed composition is therefore the opposite of what is taught in the prior art, and cannot reasonably be said to have been obvious to the person of ordinary skill.

Therefore, it is submitted that all of the Examiner's rejections are contrary to law and erroneous, and reversal of the same is respectfully requested.

Respectfully submitted,

Mark S. Graham, Reg. No. 32,355

LUEDEKA, NEELY & GRAHAM, P.C.

By:

Mark S. Graham

Registration No. 32,355

Date: January 17, 2006 P.O. Box 1871

Knoxville, Tennessee 37901

(865) 546-4305

F:\60950\60950.US\60950.us.to uspto.2006.01.17.Appeal Brief.wpd

#### \* \* \*CERTIFICATE OF MAILING\* \* \*

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

on January 17, 2006 Date

### VIII. Appendix of Claims

The claims involved in this appeal read as follows:

Claim 1. A pharmaceutical composition comprising modafinil and calcium silicate in the form of particles, wherein greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75.

Claim 2. The composition according to Claim 1 wherein from about 8% to about 30% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75.

Claim 3. The composition according to Claim 2 wherein from about 8% to about 10% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75.

Claim 4. A pharmaceutical composition comprising modafinil and calcium silicate in the form of particles, wherein greater than 5% to about 50% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 200 microns as determined by a U.S. Sieve No. 75, and less than about 8% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 250 microns as determined by a U.S. Sieve No. 60.

Claim 5. The composition according to Claim 1 wherein less than about 55% of the cumulative total of the modafinil particles in the composition have a particle size greater than about 90 microns as determined by a U.S. Sieve No. 170.

Claim 6. (Canceled).

Claim 7. The composition according to Claim 1 which additionally comprises a silicate is selected from the group consisting of sodium silicate, magnesium silicate, magnesium trisilicate, and combinations thereof.

Claim 8. (Canceled).

Claim 9. The composition according to Claim 7 wherein the silicate is magnesium trisilicate.

Claim 10. (Canceled).

Claim 11. The composition according to Claim 1 which is essentially free of

magnesium silicate.

Claim 12. The composition according to Claim 1 wherein modafinil is present in an amount of from about 1 weight percent to about 99 weight percent, based on the total weight of the composition.

Claim 13. The composition according to Claim 12 wherein modafinil is present in an amount of from about 30 weight percent to about 50 weight percent, based on the total weight of the composition.

Claim 14. The composition according to Claim 1 wherein the amount of silicate is from about 0.1 weight percent to about 50 weight percent, based on the total weight of the composition.

Claim 15. The composition according to Claim 14 wherein the amount of silicate is from about 1 weight percent to about 10 weight percent, based on the total weight of the composition.

Claim 16. The composition according to Claim 15 wherein the amount of silicate is from about 5 weight percent to about 6 weight percent, based on the total weight of the composition.

Claim 17. The composition according to Claim 1 which additionally comprises one or more excipients.

Claim 18. The composition according to Claim 17 wherein the excipient is selected from the group consisting of diluents, disintegrants, lubricants, glidants, binders, fillers, emulsifiers, electrolytes, wetting agents, solubilizers, surfactants, colors, pigments, anticaking agents and combinations thereof.

Claim 19. The composition according to Claim 18 wherein the diluent is selected from the group consisting of a starch, lactose and microcrystalline cellulose; the disintegrant selected from the group consisting of pre-gelatinized starch, a cross-linked sodium carboxymethyl cellulose, and combinations thereof; and the lubricant is magnesium stearate.

Claim 20. A process for preparing a pharmaceutical composition comprising: (I) mixing modafinil and calcium silicate to form a mixture; and (ii) optionally mixing other excipients with the mixture formed in Step (I) to form a composition.

Claim 21. The process according to Claim 20 wherein the composition is in the form

of a tablet.

Claim 22. The process according to Claim 20 wherein the composition is in the form of a capsule.

Claim 23. A method of treating a disease or disorder in a subject in need thereof comprising administering to the subject a therapeutically effective amount of the pharmaceutical composition according to Claim 1.

### IX. Evidence Appendix

Attached are copies of the following documents:

- 1. U.S. Patent Application Publication US 2003/0220403 to Corvari et al., cited by the Examiner.
- 2. U.S. Patent Application Publication US 2004/0105891 to Bentolila, cited by the Examiner.
  - 3. Appellants' August 1, 2005, Rule 131 declaration

## X. Related Proceedings Appendix

None.

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

N RE APPLICATION OF

Art Unit: 1615

PATEL ET AL.

APPLICATION NO: 10/743,366

FILED: DECEMBER 22, 2003

FOR: MODAFINIL COMPOSITIONS

### **DECLARATION UNDER 37 C.F.R. §1.131**

We, Ashish Anilbhai Patel and Gary Barbera, make the following declaration in connection with the above-identified patent application.

- We are co-inventors of the invention claimed in the above-identified patent application.
- I, Ashish Anilbhai Patel, am a citizen of India, residing at 18 Petunia Dr., Apt. 1H
  North Brunswick, NJ 08902. From 1999 to 2005, I have been employed by
  Sandoz in the Research and Development Department located in Dayton, NJ, as a
  Research Scientist.
- 3. I, Gary Barbera, am a citizen of the United States, residing at 17 Huntington Circle Dr. Medford, NJ 08055. From 2001 to 2005, I was employed by Sandoz in the Research and Development Department located in Dayton, NJ, as a Research Scientist. I left Sandoz in 2005 to join the Research and Development Department of Par Pharmaceutical, located in Woodcliff Lake, NJ, as a Research Scientist, where I am currently employed.
- 4. We have read page 2, lines 10 to 11, of the Office Action from the U.S. Patent and Trademark Office, dated March 21, 2005.
- We conceived and reduced to practice the invention claimed in the aboveidentified patent application in the Research and Development Department of

Sandoz located in Dayton, NJ, prior to November 24, 2003, which is the U.S. filing date and 35 U.S.C. 102(e) date of U.S. Patent Application Publication No. 2004/0105891 (Bentolila), as evidenced by the laboratory notebook pages 822-5-185 and 822-5-160(a), a copy of which are attached hereto as Exhibits 1 and 2. respectively, with the dates blacked out. Applicants laboratory notebook page 822-5-185 shows a pharmaceutical composition containing modafinil and calcium silicate, and references laboratory notebook page 822-5-160(a) as the lot number for the modafinil used in the composition. Laboratory notebook page 822-5-160(a) sets forth a sieve analysis worksheet for the modafinil used to prepare the modafinil composition. According to page 822-5-160(a), 21.62% of the cumulative total of modafinil particles have a particle size greater than 212 microns, which is within applicants claimed range of 5 to 50%. Thus, applicants conceived and reduced to practice one embodiment of the invention as claimed in the aboveidentified patent application prior to November 24, 2003, which is the U.S. filing date and 35 U.S.C. 102(e) date of U.S. Patent Application Publication No. 2004/0105891.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Ashish Aniibhai Patel

8/4/05

Date:

Data:

8/1/2005

The E. Modefrail Lun	emg.	_ Bo	OK No	i O C
From Patie No Oly - Co - o	Male Medefik Micro-Cel (C) bang. in So main Same	il blend by CoSynthetic K cz-5-134. Res	repleony Me eleven State of the fo	(g Trill cate ati) our raula
Formula:				- · ·
Stens # RM# Cot i		*	arg/levit	glestales
1 R646 822-5- 2 - DSOZ-L	-563 Mico Cel	-C.	200.0 25.0	5.00
3 RIIS DIO74 4 RIIZ DIOS2 5 RI4Z D9120	94 Storeh	500	217.57 25-0 25-0	5.1375 0.625 0.625
6 R116. D0094		A	De my.	0-1875 12.5 g.
* Milled through a	0-079 SCreen.		U <sub>.</sub>	
Procedum: Some				
Compremon:			8	
Thickness 0.7 Marchians 1	ton 77-0.2194	tales subm	ded for disc	Cation.
Comments!			·	
	ix look bet	ter compared E better b	adras Can	hear clear
Cahler sunface  Shap upon 65  Cahlet giction  Cahlet giction  Cahlet giction	caling from die wa dissolution	n better the	an My. Arxil	SA 010131 CONFIDENTIAL
	ologija rollokski ji jir izmirkolokologije je kana Prisideno ologije nagodorna zana aza az	mpilitatus pasaan na para pikkista dialah liberista katalah pikkista pikkista pikkista pikkista pikkista pikki	የ አገኘሪ ሲቪሞዶሶሳሲ ቀናቷ "ምንሳርምናምታምሚያቸዉሺዊ ሂ <mark>ታያል ተነበፈቀዋ</mark> ዊሊነልቃታ <b>ው ማ</b> ፕፕሮፕሮጀርና	To Page No
/itnessed & Understood by me,	h. Tamasanara	ted by	Date	
	Recor	ded by		
			ette energie	

### Sieve Analysis Worksheet

822-5-160 (A) milled 0.079"

**Drug Substance or** 

Product: Modafinil API Aerosil used (Y/N): Yes

Lot#: % of Aerosil:

screen 1 % w/w

Operator: G.Barbera

Date:

ATM Sonic Sifter

**GPTC 11154** 

Instrument ID: QCE# 88 Balance ID: QCE# 138

sample weight (g):

4.2812

Notebook # & page: DLT-166-40

Sieve#/Part	Size (um)	Tare (g)	Gross (g)	Retained (g)	% retained	cumulative % retained
60	250	38.2307	38.9890	0.7583	17.97	17.97
70	212	36.3071	36.4615	0.1544	3.66	21.62
170	90	33.5247	34.0182	0.4935	11.69	33.32
230	63	33.5607	33.9637	0.4030	9.55	42.86
325	45	31.0817 .	31.5313	0.4496	10.65	53.51
40C	38	30.0844	30.4779	0.3935	9.32	62.84
bottom	thru 38	21.0827	22.6513	1.5686	37.16	100.00

total (g): start sample 4.2209

(g):

4.2812

difference (g):

0.1

% difference:

1.4

